UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/701,238	11/04/2003	Kishore Karighattam	H1312	5261

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EXAMINER
FORD, GRANT M

ART UNIT	PAPER NUMBER
2141	

NOTIFICATION DATE	DELIVERY MODE
03/07/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

Docketing@eschweilerlaw.com

PTOL-90A (Rev. 04/07)

fnN

	Application No.	Applicant(s)
Office Action Summary	10/701,238	KARIGHATTAM ET AL.
	Examiner	Art Unit	
	Grant Ford	2141	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>04 November 2003</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>*1-21*</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>*1-21*</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>04 November 2003</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>*11-4-2003*</u>.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2.   Claims 1-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Connor

(6,430,628).

   a.   As per claim 1, Connor discloses a method comprising:

   obtaining a packet from host software, the packet comprising header

information and data being located in an array of buffers; selecting one or more buffers

of the array of buffers to coalesce according to an initial fragment size; and copying the

selected one or more buffers into a coalesced buffer (Figure 3-4, Col 5 lines 22-51).

   b.   As per claim 2 and 14, Connor discloses assembling a coalesced array

from the coalesced buffer and one or more non-selected buffers of the array of buffers

(Fig. 5-6, Col. 6 lines 30-55).

   c.   As per claim 3, Connor discloses wherein the initial fragment size is about

256 bytes (Col 6 lines 1-19).

   d.   As per claims 4 and 16, Connor discloses wherein the selected buffers

have a composite length less than the initial fragment size (Col 5 lines 41-60, Col 6 lines

1-19).

e.   As per claims 5 and 17, Connor discloses wherein the array of buffers comprises physical buffers respectively having a size and a physical address (Figs. 2 and 7, Col 5 lines 14-21).

f.   As per claims 7 and 15, Connor discloses transmitting the coalesced array on a network (Fig. 1-2, Abstract, Col 5 lines 14-21).

g.   As per claim 8, Connor discloses wherein selecting the one or more buffers comprises iteratively analyzing, in order, each buffer of the array to select buffers of the array such that their composite size is less than about the initial fragment size (Col 5 lines 22-60, Col 6 lines 1-19).

h.   As per claim 9, Connor discloses wherein selecting the one or more buffers comprises performing the following beginning with a first buffer of the array:

obtaining a size, computing a composite size as a function of the current buffer size and a composite buffer length, and on the composite size being less than the initial fragment size, selecting the current buffer and adding the current size to the composite buffer length (Col 5 lines 14-60).

i.   As per claim 10, Connor discloses determining the initial fragment size according to an overall system performance (Col 6 lines 1-19).

j.   As per claim 11, Connor discloses determining the initial fragment size according to a desired network throughput (Col 6 lines 1-19).

k.   As per claim 12, Connor discloses determining the initial fragment size according to a desired overall system performance, network, throughput, and system resource utilization (Col 6 lines 1-19).

l.   As per claim 13, Connor discloses a method comprising:

receiving an array of virtual buffers containing header information and data

for a packet; mapping buffers of the array of the virtual buffers to an array of physical

buffers, wherein one or more of the physical buffers are associate with each of the

virtual buffers; analyzing the array of virtual buffers and the array of physical buffers for

individual buffer sizes; on one or more of the virtual buffers having a size greater than

one or more associated physical buffers, selectively coalescing an initial number of

buffers of the array of virtual buffers into a coalesced buffer; and on one or more of the

virtual buffers not having a size greater than one or more associated physical buffers,

selectively coalescing an initial number of buffers of the array of physical buffers into the

coalesced buffer (Fig. 3-5, Col 4 lines 29-56, Col 5 lines 14-60, Col 6 lines 1-19).

m.   As per claim 19, Connor discloses a network medium; a host memory

including buffers for storing receive frames and transmit frames; a network device that

transmits the transmit frames from host memory to the network medium and that

receives the receive frames from the network and stores in the host memory; and a

device driver that processes the received frames and the transmit frames and that

partially coalesces buffers of the host memory employed for the transmit frames

according to an initial fragment size (Fig. 3-5, Col 4 lines 29-56, Col 5 lines 14-60, Col 6

lines 1-19).

n.   As per claim 20, Connor disclose host software that generates transmit

frames and places header information and data related to the transmit frames into

buffers of the host memory (Col 5 lines 22-60).

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4.   Claims 6,18, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Connor in view of Jacobs et al. (7,003,647), hereinafter referred to as Jacobs.

a.   As per claims 6 and 18, Connor discloses the invention substantially as

claimed above. However, Connor fails to explicitly disclose wherein the buffers

comprise virtual buffers respectively having a size and a virtual address.

Jacobs teaches wherein the buffers comprise virtual buffers respectively

having a size and a virtual address (Fig. 4a-d, Abstract, Col 3 lines 4-17, Col 6 line 25

through Col 7 line 65). It would have been obvious to one having ordinary skill in the art

at the time the invention was made to incorporate the use of virtual buffers utilizing

virtual addressing with the prior art of Connors. One of ordinary skill in the art would

have done so for the purpose of cache selection from a memory array along with a

corresponding tag from the directory or tag array (Col 1 lines 58-67).

b.   As per claim 21, Connor discloses the invention substantially as claimed

above. Additionally, Connor discloses wherein the buffers include physical buffers (Figs.

2 and 7, Col 5 lines 14-21). However, Connor fails to explicitly disclose wherein the

buffers comprise virtual buffers.

Jacobs teaches wherein the buffers comprise virtual buffers respectively

having a size and a virtual address (Fig. 4a-d, Abstract, Col 3 lines 4-17, Col 6 line 25

through Col 7 line 65). It would have been obvious to one having ordinary skill in the art

at the time the invention was made to incorporate the use of virtual buffers utilizing

virtual addressing with the prior art of Connors. One of ordinary skill in the art would

have done so for the purpose of cache selection from a memory array along with a

corresponding tag from the directory or tag array (Col 1 lines 58-67).

Conclusion

5.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Grant Ford whose telephone number is (571)272-8630.

The examiner can normally be reached on 8-5:30 Mon-Thurs alternating Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Rupal Dharia can be reached on (571)272-3880. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

gmf

JASON CARDONE
SUPERVISORY PATENT EXAMINER